## WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau

## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

WO 97/20933 (11) International Publication Number: (51) International Patent Classification 6: **A2** 12 June 1997 (12.06.97) C12N 15/16, 15/70, 1/21, C07K 14/575, (43) International Publication Date: A61K 38/22 // (C12N 1/21, C12R 1:19)

(21) International Application Number:

PCT/US96/18561

(22) International Filing Date:

3 December 1996 (03.12.96)

(30) Priority Data: 08/568,077

6 December 1995 (06.12.95)

US

(71) Applicant: SCHERING CORPORATION [US/US]; 2000 Galloping Hill Road, Kenilworth, NJ 07033 (US).

(72) Inventors: ALTMANN, Scott, W.; 2821 Alma Street, Palo Alto, CA 94306 (US). ROCK, Fernando; 721 Shell Boulevard #203, Foster City, CA 94404 (US). BAZAN, J., Fernando; 775 University Drive, Menlo Park, CA 94025 (US). KASTELEIN, Robert, A.; 463 Summit Drive, Redwood City, CA 94062 (US).

(74) Agents: LUNN, Paul, G. et al.; Schering-Plough Corporation, Patent Dept. K-6-1 1990, 2000 Galloping Hill Road, Kenilworth, NJ 07033-0530 (US).

(81) Designated States: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CZ, EE, GE, HU, IL, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

## Published

Without international search report and to be republished upon receipt of that report.

(54) Title: MUTATIONAL VARIANTS OF MAMMALIAN Ob GENE PROTEINS

(57) Abstract

Muteins, which are mutational variants of mammalian proteins. Particular positions of natural proteins are identified as critical in providing various different activities. Specific embodiments demonstrate properties of variations at these positions.

BEST AVAILABLE COPY